Case study: Beachside caravan park

Award winning caravan site not charged for all wastewater treatment

This award winning caravan site is right on the beach, with so many activities for the kids that even the parents can have a good holiday.

There were four meters billed to the site. The total billed usage was 30.2 m^3/day, which was below our calculation of 77.4 m^3/day.

A complex holiday park means a complex site investigation. We proved one meter fed into a central tank, from which water was pumped around the majority of the park. This tank was also fed by two borehole supplies.

Boreholes are very attractive to customers with high usage, because abstracted water is a lot cheaper than mains water. The customer bought this park in 2000 and straight away sunk the boreholes that April.

On an average day 51.4 m^3 is abstracted through these two boreholes, the majority of which returns to the mains sewers. Whether the water originally came from the mains or a customer's own supply, there is a cost to treating wastewater.

Over the eight years prior to our investigation, more than 140 million litres of waste was treated by the water company, at the expense of all the other consumers in the area.

Case Facts

Issue type:	Unbilled borehole supply
Teccura calculation:	77.4m^3/day
Billed usage:	30.2m^3/day
After issue resolved:	81.6m^3/day
Unbilled usage:	51.4m^3/day
Unbilled value:	£62,050 p.a.
Duration of issue:	8 years

Figure 1: The customer saves £30,000 per year by using a bore-hole supply instead of mains water

Couldn't you find this issue using bench-marking?

The graph below shows that simple benchmarking wouldn't suggest an issue at this holiday park. There are too many variables that affect water consumption. You need a more sophisticated approach, like Teccura's Complex Consumption Analysis (CCA), to pick up these kinds of issues.

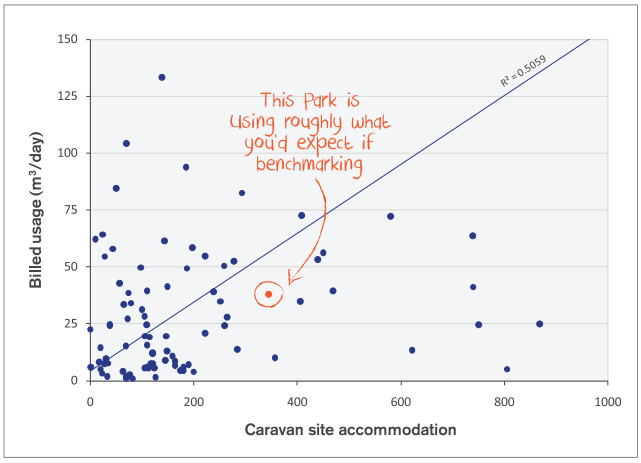

Figure 2: Benchmarks are simply not accurate at such complex sites. Without CCA, this partial billing would have gone unnoticed

Isn't there a borehole list the water com-pany could check through?

The Environment Agency licence all water abstractions over 20 m^3/day in England and Wales. It's possible to get a list and check whether the abstraction points are set up for waste services. In this waste company's area there are 4,459 points.

The vast majority of abstractions will not return any water to the sewer, because they will be used for irrigation. Some licences will no longer be used because the water is too brackish; others will have been used in old factories now closed down.

You could target licences that are more likely to return to sewer with key word searches. A search of “caravan” returns 14 abstraction points from the borehole list; “holiday” returns 63 – including this park. Most of these will be set up for waste charges. Some, like this one, may not be.

It’s also worth remembering that comparing the list to billed accounts is not easy. There isn’t a common numbering system to compare against, just a rough address.

How often do you go through and re-check the whole list? A disused well at a former foundry may now supply a block of new flats after re-development. The EA says that every year they receive 1,000 new abstraction applications.

Perhaps you could do it every year? Or every two years? The fact that this borehole had slipped through the net, without being charged for eight years, proves that data analysis projects will not pick up everything.